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**Notes:**

1. Untranslatable words are replaced with asterisks (\*\*\*\*).
2. Texts in the figures are not translated and shown as it is.

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## FULL CONTENTS

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**[Claim(s)]**

[Claim 1]The side containing medium-chain-fatty-acid ester is an inhibitor.

[Claim 2]A water-in-oil type emulsion containing an inhibitor of Claim 1.

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**[Detailed Description of the Invention]****[0001]**

[Industrial Application]the sudoriferous gland of a human body -- two kinds, an eccrine sweat gland and apocrine sweat glands, -- it is . Among these, apocrine sweat glands exist in the limited parts, such as an axillary region, an anal region, and an areola part. In response to the influence of hormone, hyperactivity of these apocrine sweat glands is carried out, and secretion of apocrine sweat increases them from adolescence. A characteristic smell (the side.) is released by decomposing this apocrine sweat with the bacteria on the surface of the skin. The side exerts displeasure on the person of \*\*\*\*\*, and seethes with him, and the strong person of \*\* receives pressure mentally. As for this invention, the side is related with an inhibitor.

**[0002]**

[Description of the Prior Art]And the antiperspirant, the germicide, the masking reagent of an owner smell component, the adsorbent, etc. are usually blended with the product of these many. [ the product which boils and means prevention or reduction of \*\* ] [ before ] The above-mentioned antiperspirant controls a sweat rate, as such an antiperspirant, most is an aluminium compound and aluminium chloride is usually used. Growth of the microorganism which the above-mentioned germicide boils and causes \*\* is controlled, and hexachlorophene, various quaternary ammonium compounds, etc. are used as such a germicide. The substance which has pleasant smells, such as eugenol, as a masking reagent of the above-mentioned owner smell component is used. As an adsorbent of the above-mentioned owner smell component, zinc oxide, activated carbon, zeolite, etc. which are indicated by JP,S63-43665,A are used. Paying attention to steroid compound synthesis / secretion depressant action of a body tissue, the trial (JP,H3-66608,A) using \*\*\*\* cortex steroid and the trial (JP,H3-193727,A) using glycyrrhizic acid are also indicated.

**[0003]**

[Problem to be solved by the invention]However, although it has the operation which decreases the

sweat which the above-mentioned antiperspirant boils and causes \*\*, even if it is impossible to control sweating completely even if it sees from a physiological viewpoint, and it thinks from the mechanism of action, there is a fault that a perfect effect is not expectable. There is a fault that the problem of safety is pointed out and the above-mentioned germicide cannot be blended by the concentration which the effect fully reveals. the above-mentioned masking reagent -- the side -- it is mixed and there is a fault that a rather unpleasant smell may be generated. To low boiling point components, such as lower fatty acid, although the above-mentioned adsorbent has a high effect, it has the fault of not being so effective, to a high boiling point component. When it applies continuously, since a side reaction arises, the application of \*\*\*\* cortex steroid can perform only temporary management. The trial using glycyrrhizic acid is impractical in order that an effect may not continue. Thus, the Prior art was very insufficient.

[0004]

[Means for solving problem]This invention persons found out that medium-chain-fatty-acid ester was dramatically effective in prevention, and the side was safe for it, as a result of the side's inquiring in order for the side whose preventive effect is high and which does not have a problem of safety to develop an inhibitor. That is, the side by which this invention contains medium-chain-fatty-acid ester is an inhibitor. It is a water-in-oil type emulsion containing this inhibitor. Hereafter, details of this invention are described. It is ester of medium chain fatty acid and a polyhydric alcohol, and although medium-chain-fatty-acid ester used by this invention is not limited in particular, it has a desirable unreacted hydroxyl group and is medium-chain-fatty-acid ester whose degrees of esterification are 0.01-0.8 still more preferably. Medium-chain-fatty-acid ester of 0.1-0.5 has especially a desirable degree of esterification. A degree of esterification here sets the number of unreacted hydroxyl groups of intramolecular to a, and when the number of hydroxyl groups which carried out the esterification reaction is set to b, it is called for by the following formula.

b

$$\text{エステル化度} = \frac{b}{a + b}$$

If it expresses by HLB, a thing of 10-18 will be preferred. For example, diglycerol mono- medium-chain-fatty-acid ester, triglycerol mono- medium-chain-fatty-acid ester, triglycerol sesquimediu-chain-fatty-acid ester, tetraglycerol mono- medium-chain-fatty-acid ester, tetraglycerol sesquimediu-chain-fatty-acid ester, tetra GURISERINJI medium-chain-fatty-acid ester, pentaglycerol mono- medium-chain-fatty-acid ester and a pen tag -- a lycee -- RINJI medium-chain-fatty-acid ester, hexaglycerine mono- medium-chain-fatty-acid ester, hexaglycerine sesquimediu-chain-fatty-acid ester, hexa GURISERINJI medium-chain-fatty-acid ester, and decaglycerol mono- medium-chain-fatty-acid ester. Decaglycerol sesquimediu-chain-fatty-acid ester, DEKAGURISERINJI medium-chain-fatty-acid ester, and decaglycerol bird medium-chain-fatty-acid ester can be raised. Medium chain fatty acid said to this invention is especially a general term for a substance which contains carboxylic acid as a functional group with a compound of the carbon numbers 8-14 produced by refining without hydrolyzing fats and oils extracted from natural animals and plants, and dissociating, or dissociating, and it does not limit. It may be fatty acid produced by using petroleum etc. as a raw material and compounding chemically. Hydrogenation etc. may carry out these fatty acid and it may return. A mixture of palmitic acid, lauric acid, capric acid, undecanoic acid, decenoic acid, hydroxy decenoic acid, palmitoleic acid, or these fatty acid can be illustrated. What is necessary is to take into consideration an effect of a product for which it

asks in selection of these fatty acid, and just to decide suitably. If an environmental problem etc. are taken into consideration and fatty acid of natural animals-and-plants origin desires temporal stability preferably again, fatty acid which does not have an unsaturated double bond two or more will be preferred. A polyhydric alcohol said to this invention is a thing which has two or more hydroxyl groups in intramolecules, such as glycerol, polyglycerin, cane sugar, sorbitan penta ERIS RITTO, and propylene glycol, or its mixture, and especially polyglycerin is preferred.

[0005] It has a hydroxyl group and an ether linkage in the intramolecular produced by carrying out dehydration condensation of the glycerol to the polyglycerin said to this invention. All the things that are the substances which do not have other functional groups and have a structure equivalent regardless of how of a raw material process can be pointed out, and diglycerol, triglycerol, tetraglycerol, pentaglycerol, hexaglycerine, decaglycerol, or these mixtures can be illustrated. Polyglycerin is obtained by usually heating glycerol under ordinary pressure or a reduced pressure under an alkaline catalyst, Remove low boiling point components etc. through gases, such as nitrogen and a steam, for the purpose of use, or, Reduction treatment according to hydrogenation etc. in removing a color component and a smell component using adsorbents, such as activated carbon, \*\*\*\* [, and ] is performed, and by molecular distillation and rectification, fractionation is carried out and it is refined by the boiling point. [ removing ion components, such as a catalyst used by ion exchange resin, an ion exchange membrane, etc., ] Polyglycerin can be obtained, even if it is considered as a raw material, and compounds and refines glycidol, epichlorohydrin, monochlorohydrin, etc. Glycerol, partial alcoholate of the polymer and halogenated hydrocarbon, or oxy halogenated hydrocarbon can be used as a raw material, and it can obtain by a dehalogenation alkali-metal-salt reaction. Medium-chain-fatty-acid ester of this invention can be manufactured by a publicly known method. For example, it can esterify from heating medium chain fatty acid and a polyhydric alcohol under ordinary pressure or a reduced pressure under an alkaline catalyst, an acid catalyst, or a non-catalyst. It can obtain also by an ester interchange with the triglyceride which uses medium chain fatty acid, such as an ester exchange reaction with the methyl ester of medium chain fatty acid, and ethyl ester, MCT and palm kernel oil, and palm oil, as a principal component.

[0006] The demand on use of a product may refine the obtained medium-chain-fatty-acid ester. What kind of publicly known method may be especially sufficient as the methods of refining, and they are not limited. For example, reduced pressure preparation may be performed, using a steam, nitrogen, etc. as carry Argus in carrying out adsorption treatment \*\*\*\*, it may wash using an acid or an alkali, or molecular distillation may be performed, and activated carbon, activated clay, etc. may refine. Or it may refine using a liquid-liquid distribution, adsorbent, resin, molecular-sieving, loose reverse osmotic membrane, and ultra filtration film etc. As other desirable components by which the side of this invention is blended with an inhibitor, a prevention component is mentioned for various kinds of sides conventionally used for this kind of product. For example, aluminium hydroxychloride, aluminium chloride, aluminium sulfate, A basic aluminum bromide, aluminium phenolsulfonic acid, tannic acid, Antiperspirants, such as aluminium naphthalenesulfonic acid and basic aluminium iodide, 2,4,4'-trichloro-2'-hydroxy diphenyl ether, 3,4,4'-trichlorocarbaanilide (TCC), benzal chloride KONUMU, Alkyl chloride trimethylammonium, resorcinol, phenol, sorbic acid, Masking reagents, such as germicides, such as salicylic acid and hexachlorophene, musk, skatole, lemon oil, RABENTA oil, an absolute, a jasmin, vanillin, benzoin, benzyl acetate, and menthol, etc. can be raised. Although the side of this invention changes also with pharmaceutical forms in an inhibitor, Oil, a surface active agent,

water, alcohols, saccharides, ester, antiseptics, Antiphlogistics, such as hormone, such as vitamins, such as vitamin A, vitamin D, vitamin E, and a vitamin K, estradiol, and cortisone, and allantoin, other moisturizers, a thickener, perfume, a pigment, etc. can be suitably blended in the range which does not spoil the effect of this invention.

[0007] The surface active agent which can be used Lecithin or its partial hydrolysates, such as soy lecithin, yolk lecithin, and rapeseed lecithin, Caprylic acid monoglyceride, capric acid monoglyceride, lauric acid monoglyceride, Myristic acid monoglyceride, palmitic acid monoglyceride, stearic acid monoglyceride, Behenic acid monoglyceride, oleic acid monoglyceride, elaidic acid monoglyceride, Monoglyceride, such as recinoleic acid monoglyceride and condensation recinoleic acid monoglyceride, or these monoglyceride mixtures, Or acetic acid of these monoglyceride, citric acid, succinic acid, malic acid, Organic acid monoglyceride, caprylic acid sorbitan ester which are ester with organic acids, such as tartaric acid, Capric acid sorbitan ester, lauric acid sorbitan ester, myristic acid sorbitan ester, Palmitic acid sorbitan ester, stearic acid sorbitan ester, Sorbitan fatty acid ester, such as behenic acid sorbitan ester, oleic acid sorbitan ester, elaidic acid sorbitan ester, recinoleic acid sorbitan ester, and condensation recinoleic acid sorbitan ester, Caprylic acid propyleneglycol ester, capric acid propyleneglycol ester, Lauric acid propyleneglycol ester, myristic acid propyleneglycol ester, Palmitic acid propyleneglycol ester, stearic acid propyleneglycol ester, Behenic acid propyleneglycol ester, oleic acid propyleneglycol ester, Elaidic acid propyleneglycol ester, recinoleic acid propyleneglycol ester, Propylene glycol fatty acid ester, such as condensation recinoleic acid propyleneglycol ester, Caprylic acid sucrose esters, capric acid sucrose esters, lauric acid sucrose esters, Myristic acid sucrose esters, palmitic acid sucrose esters, stearic acid sucrose esters, Behenic acid sucrose esters, oleic acid sucrose esters, elaidic acid sucrose esters, Nonionic surface active agents and amphoteric surface active agents, such as sucrose fatty acid ester, such as recinoleic acid sucrose esters and condensation recinoleic acid sucrose esters, an anionic surface active agent, a cationic surface active agent, etc. can be illustrated. The cream which the side of this invention can make an inhibitor pharmaceutical forms, such as aerosol, rollon, powder, cream, a lotion, a stick, a solid cleaning agent, and a liquid detergent, and consists especially of a water-in-oil type emulsion is preferred. In this case, although the quantity in particular of the water to add is not limited, it is usually 10 to 80%, and 10 to 60% is preferred. Direction for use is applied to an infra-axillary region etc. 1 to 3 times per day, and is used by neglecting it as it is or washing away, for example.

[0008]

[Working example] The clinical trial result of an actual osmidrosis patient explains this invention below. Subject patients were 100 volunteers. Each component (except purified water) is mixed at a rate shown in the column of Embodiments 1-13 of Tables 1-2, and it keeps at 70 \*\*. The cream of the water-in-oil type (W/O type) emulsion was obtained by heating purified water at 70 \*\* and emulsifying gradually in addition to an oil phase.

[0009]

[Table 1]

	実施例					
	1	2	3	4	5	6
グリセリンモノラウリン酸エステル	10					
ジグリセリンモノラウリン酸エステル		10				
トリグリセリンモノラウリン酸エステル			10			
グリセリンモノカプリリン酸エステル				10		
ジグリセリンモノカプリリン酸エステル					10	
トリグリセリンモノカプリリン酸エステル						10
グリセリンモノカブリル酸エステル						
ジグリセリンモノカブリル酸エステル						
トリグリセリンモノカブリル酸エステル						
グリセリンモノカブリル酸エステル						
ジグリセリンモノカブリル酸エステル						
トリグリセリンモノカブリル酸エステル						
グリセリンモノカウンデカン酸エステル						
ジグリセリンモノカウンデカン酸エステル						
トリグリセリンモノカウンデカン酸エステル						
ポリグリセリンモノミリスチン酸エステル						
グリセリンモノステアリン酸エステル						
グリセリンモノオレイン酸エステル						
ソルビタンモノオレイン酸エステル	8	8	8	8	8	8
ソルビタンモノラウリン酸エステル						
ソルビタンセスキオレイン酸エステル						
サリチル酸						
ラノリン	5	5	5	5	5	5
ミツロウ	10	10	10	10	10	10
オリーブ油	7	7	7	7	7	7
精製水	25	25	25	25	25	25
防腐剤(メチルガラベン)	0.5	0.5	0.5	0.5	0.5	0.5
流动パラフィン	34.5	34.5	34.5	34.5	34.5	34.5
合計	100	100	100	100	100	100

[0010]

[Table 2]

	実施例						
	7	8	9	10	11	12	13
グリセリンモノラウリン酸 エステル							
ジグリセリンモノラウリン酸 エステル							
トリグリセリンモノラウリン酸 エステル							
グリセリンモノカブリリン酸 エステル							
ジグリセリンモノカブリリン酸 エステル							
トリグリセリンモノカブリリン酸 エステル							
グリセリンモノカブリル酸 エステル							
ジグリセリンモノカブリル酸 エステル							
トリグリセリンモノカブリル酸 エステル							
グリセリンモノウンデカン酸 エステル							
ジグリセリンモノウンデカン酸 エステル							
トリグリセリンモノウンデカン酸 エステル							
ボリグリセリンモノミリスチン酸 エステル							
グリセリンモノステアリン酸 エステル							
グリセリンモノオレイン酸 エステル							
ソルビタンモノオレイン酸 エステル	8	8	8	8	8	8	8
ソルビタンモノラウリン酸 エステル							
ソルビタンセスキオレイン酸 エステル							
サリチル酸							
ラノリーン	5	5	5	5	5	5	5
ミツロウ	10	10	10	10	10	10	10
オリーブ油	7	7	7	7	7	7	7
精製水	2.5	2.5	2.5	2.5	2.5	2.5	2.5
防腐剤(メチルパラベン)	0.5	0.5	0.5	0.5	0.5	0.5	0.5
流动パラフィン	34.5	34.5	34.5	34.5	34.5	34.5	34.5
合計	100	100	100	100	100	100	100

[0011]It carried out like the embodiment at a rate shown in the one to comparative example 5 table 3.

[0012]

[Table 3]

	比較例				
	1	2	3	4	5
グリセリンモノラウリン酸 エステル					
ジグリセリンモノラウリン酸 エステル					
トリグリセリンモノラウリン酸 エステル					
グリセリンモノカプリリン酸 エステル					
ジグリセリンモノカプリリン酸 エステル					
トリグリセリンモノカプリリン酸 エステル					
グリセリンモノカブリル酸 エステル					
ジグリセリンモノカブリル酸 エステル					
トリグリセリンモノカブリル酸 エステル					
グリセリンモノカウンチカン酸 エステル					
ジグリセリンモノカウンチカン酸 エステル					
トリグリセリンモノカウンチカン酸 エステル					
ポリグリセリンモノミリストチン酸 エステル					
グリセリンモノステアリン酸 エステル	1 0				
グリセリンモノオレイン酸 エステル		1 0			
ソルビタンモノオレイン酸 エステル	8	8	8		
ソルビタンモノラウリン酸 エステル				8	
ソルビタンセスキオレイン酸 エステル					4
サリチル酸	1 0				
ラノリン	5	5	5	5	5
ミツロウ	1 0	1 0	1 0	1 0	1 0
オリーブ油	7	7	7	7	7
精製水	2 5	2 5	2 5	2 5	2 5
防腐剤（メチルガラバン）	0.5	0.5	0.5	0.5	0.5
流動パラフィン	34.5	34.5	34.5	34.5	34.5
合計	100	100	100	100	100

[0013]The side applied 1 ml of products of Tables 1-3 under the side by the shot usual method to 100 patients on the first. attaching O to a mode -- moreover -- stinking (the side.) -- completely -- although \*\*\*\* is carried out [ smell ] and most of five points and a smell carries out [ smell ] four \*\*\*\* [ three ] for \*\*\*\* considerably a little, from usual, an average is calculated by making one point, usual, and strange straw \*\*\*\* into zero point for right \*\*, and the result is shown in Tables 4-5.

[0014]

[Table 4]

	臭全 くいな (へわ きが) は	臭い は殆ど ない	や や臭 いが する	かが なり常 より良 いが良 する	通常 と変 わら ない	平 均 値
実 施 例	1		○			4.2
	2	○				5.0
	3	○				4.8
	4		○			4.0
	5	○				4.5
	6	○				4.7
	7		○			4.2
	8	○				4.8
	9	○				4.9
	10		○			4.0
	11	○				4.7
	12	○				4.4
	13	○				4.8

[0015]

[Table 5]

		臭全 いき （へ わ き が） は	臭 いは 殆 ど ない	や や 臭 い が す る	かが なり 通 り 臭 い が 良 い す る	通 常 と 変 わ ら な い	平 均 値
比 較 例	1				○	0.8	
	2				○	0.3	
	3				○		
	4				○		
	5				○		

[0016]The following [ show / the embodiment in this invention ] can be considered.

- (1) The side containing glycerol medium-chain-fatty-acid ester is an inhibitor.
- (2) The side containing diglycerol medium-chain-fatty-acid ester is an inhibitor.
- (3) The side containing triglycerol medium-chain-fatty-acid ester is an inhibitor.
- (4) The side containing polyglycerin medium-chain-fatty-acid ester is an inhibitor.
- (5) The side containing tetraglycerol medium-chain-fatty-acid ester is an inhibitor.
- (6) The side containing pentaglycerol medium-chain-fatty-acid ester is an inhibitor.
- (7) The side containing hexaglycerine medium-chain-fatty-acid ester is an inhibitor.
- (8) The side containing decaglycerol medium-chain-fatty-acid ester is an inhibitor.
- (9) The side containing glycerol laurate is an inhibitor.
- (10) The side containing diglycerol laurate is an inhibitor.
- (11) The side containing triglycerol laurate is an inhibitor.
- (12) The side containing polyglycerol laurate is an inhibitor.
- (13) The side containing tetraglycerol laurate is an inhibitor.
- (14) The side containing pentaglycerol laurate is an inhibitor.
- (15) The side containing hexaglycerine laurate is an inhibitor.

[0017](16) The side containing decaglycerol laurate is an inhibitor.

- (17) The side containing glycerol caprate is an inhibitor.
- (18) The side containing diglycerol caprate is an inhibitor.
- (19) The side containing triglycerol caprate is an inhibitor.
- (20) The side containing polyglycerol caprate is an inhibitor.
- (21) The side containing tetraglycerol caprate is an inhibitor.
- (22) The side containing pentaglycerol caprate is an inhibitor.
- (23) The side containing hexaglycerine caprate is an inhibitor.
- (24) The side containing decaglycerol caprate is an inhibitor.
- (25) The side containing glycerol caprylate is an inhibitor.
- (26) The side containing diglycerol caprylate is an inhibitor.
- (27) The side containing triglycerol caprylate is an inhibitor.

- (28) The side containing polyglycerin caprylate is an inhibitor.  
(29) The side containing tetraglycerol caprylate is an inhibitor.  
(30) The side containing pentaglycerol caprylate is an inhibitor.  
[0018](31) The side containing hexaglycerine caprylate is an inhibitor.  
(32) The side containing decaglycerol caprylate is an inhibitor.  
(33) The side containing glycerol undecanoic acid ester is an inhibitor.  
(34) The side containing diglycerol undecanoic acid ester is an inhibitor.  
(35) The side containing triglycerol undecanoic acid ester is an inhibitor.  
(36) The side containing polyglycerin undecanoic acid ester is an inhibitor.  
(37) The side containing tetraglycerol undecanoic acid ester is an inhibitor.  
(38) The side containing pentaglycerol undecanoic acid ester is an inhibitor.  
(39) The side containing hexaglycerine undecanoic acid ester is an inhibitor.  
(40) The side containing decaglycerol undecanoic acid ester is an inhibitor.  
(41) The side containing glycerol palmitate is an inhibitor.  
(42) The side containing diglycerol palmitate is an inhibitor.  
(43) The side containing triglycerol palmitate is an inhibitor.  
(44) The side containing polyglycerin palmitate is an inhibitor.  
(45) The side containing tetraglycerol palmitate is an inhibitor.  
[0019](46) The side containing pentaglycerol palmitate is an inhibitor.  
(47) The side containing hexaglycerine palmitate is an inhibitor.  
(48) The side containing decaglycerol palmitate is an inhibitor.  
(49) The side containing glycerol palmitoleic acid ester is an inhibitor.  
(50) The side containing diglycerol palmitoleic acid ester is an inhibitor.  
(51) The side containing triglycerol palmitoleic acid ester is an inhibitor.  
(52) The side containing polyglycerin palmitoleic acid ester is an inhibitor.  
(53) The side containing tetraglycerol palmitoleic acid ester is an inhibitor.  
(54) The side containing pentaglycerol palmitoleic acid ester is an inhibitor.  
(55) The side containing hexaglycerine palmitoleic acid ester is an inhibitor.  
(56) The side containing decaglycerol palmitoleic acid ester is an inhibitor.  
(57) Water-in-oil type emulsion in which the side given in (1) - (56) contains an inhibitor.

[0020]

[Effect of the Invention]according to this invention, the conventionally difficult side was alike, received and the remarkable preventive effect was accepted.

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[Translation done.]